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ABSTRACT

One of the working papers in the final report by the Arizona Board of Regents' (ABOR) Task Force on Excellence, Efficiency and Competitiveness, this study emphasizes Arizona's community college-university articulation. Arizona has one of the largest systems of community colleges among the western states. Enrollment patterns are discussed, and it is noted that community colleges provide a significant pathway of entrance into Arizona's universities. Cooperative community college-university programs are explained. Issues in articulation include course equivalency, course content, degree requirements (for each of Arizona's three public universities), and general education requirements. Differing standards of expectation and achievement are discussed. Arizona college students in increasing numbers are using the facilities of community colleges and the three public universities. Much has been done to create a situation in which transfer from one segment of the public postsecondary educational system to another is enhanced. However, significant problems remain. Recommendations are to have: (1) the Joint Conference Committee continue encouraging the respective boards to make the necessary investment of faculty and administrator time to continue exploring ways of achieving more coordination at the level of the disciplines, and (2) of achieving the ABOR recognize the Associate in Arts and Science degree as evidence of equivalency in meeting the lower division general education requirements of the Arizona universities. Six tables are included. (SM)

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COMMUNITY COLLEGE-UNIVERSITY ARTICULATION IN ARIZONA

ROBERT MACVICAR

INTRODUCTION

Among the western states, Arizona has one of the largest and most comprehensive systems of community colleges. Developed largely in the 1960's, these dispersed institutions have provided access into the higher education system to the rapidly growing populations in Maricopa and Pima counties and students in the more remote areas. At present only Apache, Coconino, Gila, Greenlee and Santa Cruz Counties are not within a community college district. Residents of these counties may enroll in any of the community colleges at tuition and fee rate subsidized by the Board of Supervisors. In addition, special arrangements exist between Pima Community College District and Santa Cruz County that permit students from that county to enroll as residents. Organized districts also serve adjacent areas without community colleges by establishing centers or offering individual courses on a demand basis.

In 1986-87, the community college system of Arizona served a total of 126,356 students, of which 24,739 were full-term and 101,617 were part-time. 1,959 academic and 2,251 occupational degrees were awarded. The Maricopa County Community College District is the third largest in enrollment among community college districts in the U.S., exceeded only by the Los Angeles and Chicago community colleges. It has been estimated that 30 percent of the high school graduates in Maricopa County enroll during the following year in one of the colleges of the district.

ENROLLMENT PATTERNS

Community colleges provide a significant pathway of entrance into the universities for the citizens of the state. In a recent year, students transferring from Maricopa colleges provided 28 percent of the undergraduate enrollment at Arizona State University. Of the present junior class at the university, 44 percent have attended one or more of the Maricopa Community Colleges. Data regarding the

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sources of undergraduate students at the state universities are presented in Table I.

TABLE I

Source of Arizona Resident Undergraduate Students at First Entry, 1986-87 Year.

	UofA	ASU	NAU
Arizona High Schools	2,178	2,080	1,240
Arizona Community Colleges	962	1,942	652
TOTAL	3,140	4,022	1,892

These data show that the community colleges are a major source of students at first entry. Added to this number are many students who leave the university of original entry, later enroll in a community college and then return to one of the universities (not necessarily to the one of original entry which distorts the above reported data to some degree).

In addition to students who withdraw or are suspended from the universities and later enroll in an Arizona community college, there are many who enroll concurrently in one of the metropolitan area colleges while attending either Arizona State University or the University of Arizona. Indeed, this procedure was so extensive in the past that special legislation was enacted to prevent misuse of the privilege.

The efficient operation of this complex of public community colleges and state universities requires the development of a coordinating mechanism that provides the student with information and guidance so that appropriate decisions can be made. The avoidance of "slippage" in the transfer process is rendered more significant by the number of students who transfer from the community colleges--3,556 in the 1986-87 year.

The Arizona community colleges who provide access to a significant number of high school graduates who enter post-secondary institutions. Data on the number of students who graduated from high school during the 1985-86 year and enrolled in an Arizona community college in the fall, 1986 is presented in Table II.

TABLE II

Arizona High School Graduates, 1986, Who Enrolled in Community Colleges, Fall, 1986, as a Percentage of Total First-Time Entering Students.

	1986 Graduates Enrolled	Students Enrolled	Total %
Cochise	237	1,985	11.94
Graham	301	1,542	19.52
Maricopa	4,930	23,867	20.66
Mohave	85*	N/A	N/A
Navajo	129	1,406	9.17
Pima	1,217	4,8612	5.03
Pinal	94	2,071	4.54
Yavapai	N/A	2,124	N/A
Yuma/La Paz	10	12,723	3.71

* Estimated number

The percentages of first-time entering students who are recent high school graduates varies widely among the rural community colleges, from 19.52 at Eastern Arizona College to 3.71 at Arizona Western College. More than twenty percent of first-time entering freshmen students are graduates of the preceding year for the colleges of the two urban community college districts. Likewise, students at the urban community colleges tend to be younger, with an average of 18.4 percent below 20 years of age in the colleges of the Maricopa District and 16.5 in the Pima District. The weighted average percentage of the rural

districts is 14.9.

Somewhat different comparisons are presented in Table III which compares 1986 high school graduates with Fall, 1986 enrollments of Arizona high school graduates by county of origin and the related community college district. Again, wide divergence is apparent, with Eastern Arizona College enrolling more 1986 high school graduates than had been produced in Graham County the preceding spring. Pinal and Yuma/La Paz again are low. Eastern Arizona College has a vigorous outreach program serving Gila and Greenlee counties. Only 44.9 percent of the Fall, 1986 enrollment was from Graham County. No obvious explanation is available for the very low percentages for Pinal and Yuma-La Paz districts.

TABLE III

Relation of Total High School Graduates, 1986, by County of Origin to 1986 Arizona High School Graduates Enrolling in Contiguous Community College District, Fall, 1986.

County/CC District	1986 High Sch. Graduates	Comm.Coll. Enrollments of 1986 Arizona High Sch. Graduates	Percentages
Cochise	923	237	25.7
Graham	298	301	101.0
Maricopa	15,127	4,930	32.6
Mohave	602	85*	14.11
Navajo	899	129	14.3
Pima	4,695	1,217	25.9
Pinal	910	94	10.3
Yavapai	722	N/A	N/A
Yuma/La Paz	875	101	11.5

* Estimated

In addition to serving as entry sites for students seeking to pursue programs culminating in transfer to senior institutions and the baccalaureate degree, the community colleges are also the recipient of a significant "reverse transfer" from the universities. Information on the numbers of such students is not readily available, but the fact that in the Fall of 1986 there were more than 25,000 students who had previously attended another post-secondary institution suggests how substantial this practice is, amounting to more than 20 percent of the total enrollment. Given the high mobility of the Arizona urban population, many of the students in the Maricopa and Pima Community College districts had previously attended out-of-state institutions.

Community colleges and universities share responsibility for educational programming in several ways. Arizona State University uses community college instructors provided by South Mountain Community College, to teach pre-college level courses in writing and mathematics on the Tempe campus. A similar arrangement exists between Northern Arizona University and Yavapai Community College.

The universities and the community colleges share physical resources when off-campus offerings of the universities use the classrooms and other resources of a community college. During the formative years of ASU West, use has been made of the resources of Glendale Community College. ASU West, an upper division and graduate "branch campus" of Arizona State University, will depend almost exclusively on the transfer of students who complete their

lower division requirements in one of the colleges of the Maricopa Community College system. Northern Arizona University has made extensive use of community college faculties for the outreach program of its Center for Excellence in Education.

In Tucson, Pima Community College provides programs at multiple sites leading to the A.A. degree. The University of Arizona has adopted policies which, with some exceptions, regard community college students pursuing the A.A. degree as having equivalent status to native students who enroll initially at the University and continue their enrollment.

COOPERATIVE COMMUNITY COLLEGE - UNIVERSITY PROGRAMS

Until restrictive legislation was passed (A.R.S. 15-1807), there was frequent joint enrollment by students at Arizona State University in the colleges in the Maricopa district and by students at the University of Arizona in the Pima college district. A somewhat related issue is the programmed joint enrollment by university students who require education below the collegiate level, a service frequently provided by both community colleges and universities. Arizona State University (in affiliation with the Maricopa district) and Northern Arizona University (in affiliation with the Yavapai district) now provide this kind of remediation by contract with the respective district to teach the courses on the physical facilities of the university. It is asserted, however, that many students prefer to take the needed courses from a community college while maintaining their primary affiliation with one of the universities.

Perhaps the most intimate relationship between the university and community college segments of post-secondary education in Arizona has developed between Northern Arizona University and Arizona Western College in Yuma. For several years, upper division and graduate courses, primarily in teacher education, have been offered by the university in cooperation with and using the physical resources of this community college. Recently the university and the college have agreed on a joint effort to create a limited upper-division program based on the first two years of study at Arizona Western College. An expanded curricula leading to degrees in general studies, business and teacher education will be offered. Under guidelines approved recently by the Regents, this would qualify as a Center and would receive funds for a resident faculty and administration, rental of space and provision of support for instructors and student services. A decision package was recommended, and this center became operational in the Fall, 1988.

A somewhat different proposal has recently been submitted by The University of Arizona for a center to provide expanded educational opportunity in Sierra Vista. The telecommunications capability currently existing between the campus in Tucson and Fort Huachuca, would be extended to the Sierra Vista campus of the Cochise College district, which would serve in much the same fashion as is anticipated for the NAU/Yuma Center. More of the instruction would be offered by means of television. This proposal has been formally approved by the Regents, and a non-priority decision package was recommended to the Executive Department and the legislative

assembly for funding for fiscal year 1988-89. It was approved

ISSUES IN ARTICULATION

COURSE EQUIVALENCY

The Boards responsible for oversight of the University system and the Community College system have created a coordinating group, the Joint Conference Committee. This group, composed of three Board members and three Directors, meet twice each year to discuss issues and receive reports from ad hoc committees created to deal with specific problems, topics or issues.

Currently, one such committee is continuing to monitor the annual publication of a "Course Equivalency Guide." This document provides information to community college and university students on the transferability of community college courses and their "equivalency" by course number wherever appropriate, at each of the three universities. Courses not qualifying for specific course designation but eligible for application toward the baccalaureate degree are designated as "university elective" or "departmental elective." A significant effort has produced this useful guide. Community college students will find it easier to select those courses that will be appropriate for transfer and to avoid those which will be less likely to be fully recognized in the program the student plans to enter. Although not designed for use by university students, the Guide provides information useful for the student who seeks to acquire transfer credit from a specific community college for a particular university course needed for graduation.

The usefulness of this document would be enhanced if appropriate information on the general education requirements of each Arizona University were included. Currently, only Arizona State University and Northern Arizona University have instituted general education requirements. The University of Arizona requires somewhat different general education course distribution among the nine academic units offering undergraduate degrees. The Course Equivalency Guide requires annual up-dating, and an on-line computer file of its contents would make current information available to students and advisors since changes would be made whenever approved by the institutional administration. Proposals for creating an interactive on-line system have been proposed to the Arizona legislature but not approved for funding.

COURSE CONTENT

A second group created by the Joint Conference Committee is composed of the chief academic officers of the universities and of a selected number of community colleges. This group has sought to deal with the more complex issues such as the uniformity of course content and common course numbers and name for the same general topic. There has been the beginning of sharing of course syllabi and evaluative instruments. Some 27 subject areas have been reviewed by the faculty concerned with the discipline and, as a result, significant progress has been made in adopting uniform nomenclature and standards for acceptable performance.

These relatively recent efforts have dealt with some of the less complex issues of

articulation, primarily at the course level. These efforts must be continued, in part because of the continuing changes in the availability of courses at the community college level and curriculum revision at the universities.

DEGREE REQUIREMENTS

Another issue that may interfere with the most efficient transfer of students from the community colleges to the universities relates to different practices by the universities with respect to changes in requirements for degrees subsequent to a student's initiation of a program. There is widespread adoption by institutions of higher education of the principle that a student in continuous residence may choose to fulfill the requirements listed in the catalog in effect at the time of entrance or any subsequent catalog prior to graduation. This is true at the three Arizona universities for "native" students, i.e., students enrolling as first-time freshmen and continuing at the same university. Procedures differ, however, among the three institutions for those who enter as transfer students, who interrupt their collegiate programs, or who engage in "reverse transfer" and then return to the university which they had attended previously. The requirements are listed below for each of the three universities.

o Arizona State University

1. "Provided their college attendance has been continuous, students will be permitted to follow the degree requirements specified in the ASU catalog in effect at the time they were initially admitted to ASU or to an Arizona community college (though a student may elect to graduate under any subsequent catalog issued while the student is in continuous residence)."

In an interpretation of the above regulation printed in the 1987-88 General Catalog, it is stipulated that "reverse transfer" to an Arizona community college and subsequent return to ASU does not modify the above regulation as long as enrollment is continuous.

2."A student who has been readmitted after a period of non attendance, or after attending an institution other than ASU or an Arizona community college, will graduate under the curriculum, course requirements, and regulations for graduation as stated in the catalog at the time of readmission. While in continuous enrollment, a student may choose to graduate under any catalog issued subsequent to readmission."

o Northern Arizona University:

1. "Undergraduate students maintaining continuing student status must meet the degree requirements in effect at the time of their admission to the university or the requirements in effect at the time of their graduation, whichever the student elects." Two year college transfer students may follow the degree requirements in effect [at NAU] at the time they began their two year college work, provided their attendance has been continuous and normal progress has been made."

2. "Once a student looses continuing student status and must apply for readmission to attend the university, the student must meet the degree requirements in effect at the time of

readmission or the requirements in effect at the time of graduation."

3. Readmission. "Former NAU students who have not registered for two consecutive semesters (excluding summers) must complete a new application for admission...."

o University of Arizona:

1. "Choice of catalog under which students may be graduated--Candidates for bachelor's degrees may elect to fulfill degree requirements as outlined in any one catalog in effect during their dates of registration for university credit at the University of Arizona, with the following exception: Students who withdraw from the University for more than two consecutive semesters must meet degree requirements as outlined in the catalog in effect at the date of their re-enrollment for university credit or any subsequent catalog in effect during their dates of registration for university credit. Students admitted to the University directly from an Arizona community college may, provided not more than two consecutive semesters have elapsed since their attendance at the community college, elect to fulfill degree requirements as outlined in any one catalog in effect during their dates of attendance at the Arizona community college, or any subsequent catalog in effect during their dates of registration for university credit. This provision does not apply to the grade average requirements for graduation, which are governed solely by those in effect during the student's dates of attendance for university credit at the University of Arizona."

These excerpts show the universities recognize the important role played by the community colleges in providing collegiate transfer opportunities. All three universities give special recognition to transfer students from Arizona community colleges (ASU or UA), or all two-year colleges (NAU). ASU gives special consideration to the student who enters ASU and then enters or re-enters a community college. NAU requires students who interrupt their program for two semesters to meet the curriculum and course requirements in effect at re-entry. The UA permits a two-semester period to elapse without enrollment in that university or between termination of enrollment in an Arizona community college and entry to the UA without impact on the degree requirements that must be met. At ASU readmission is required if more than a one-semester interruption has occurred.

The issue of "reverse transfer" to an Arizona community college and its effect on graduation requirements on re-entry is less clear. As noted above, ASU treats this essentially as a continuation of ASU enrollment. At NAU it would appear that any interruption of more than one semester, regardless of continued enrollment in a community college would trigger a change of graduation requirement. At the University of Arizona, a two-semester interruption (which presumably would apply to a transfer to another institution of higher education as well as non-enrollment) would be acceptable for the student to continue to qualify under the requirements of the catalog in effect on original entry.

Thus, while the universities seek to

recognize the problems inherent in the articulation of their respective programs with the nine Arizona community college districts, they are not uniform in their practices. Because many community college students are uncertain about the senior collegiate institution they will ultimately attend and from which they will seek the baccalaureate degree, such divergence in practices may cause a student to spend unnecessary time in pursuit of a degree. Students in the non-urban areas of Arizona would presumably be less certain of their ultimate university of attendance. Students who must for financial reasons interrupt their program are also at greater risk of prolonging their attendance due to changes in requirements at the university.

GENERAL EDUCATION REQUIREMENTS

Another aspect of curricular coordination and articulation is that of variation among the Arizona universities in the general education requirements for the baccalaureate degree. As is true of other articulation issues, if the students know with considerable certainty not only which university they will seek to enter and, in the case of the University of Arizona, what academic program they will choose as their major, it is feasible to maximize the opportunities of the first two years in a community college. The leaders of the Arizona community colleges point to the well recognized fact that there is no general agreement about the competencies that qualify a person to meet the requirements of being "generally educated." Even less conformity exists about the particular kind of collegiate courses which will provide evidence for the attainment of these competencies. Since there is no single, agreed-upon pattern of general education, they agree that the universities should not require the student who seeks to transfer to match exactly the requirements on a course-by-course basis. It would be more efficient if the attainment of an A.A. or A.S. degree from a community college could be recognized by all the universities of Arizona as meeting the lower division general education requirements for the baccalaureate degree.

The problems inherent in such a proposal are, in part, the lack on the part of university faculty to recognize a distribution of courses not precisely matching the one they have approved. The three universities (as Table IV shows) vary in the lower division general education requirements. Indeed, at present, the University of Arizona has only a six-hour requirement in English Composition as a university-wide general education requirement; each of the schools and colleges of the University have their own pattern, giving a total of 11 different general education course patterns from which the beginning community college students would need to choose if maximum efficiency is to be achieved. To be sure, some of the variation is more apparent than real, but nonetheless it would be less confusing if a student could complete a degree at an Arizona community college without trying to match on a course-by-course basis for a particular university, only to find a need to change to another university or to a different program. Many community college leaders feel that such a policy would also encourage students to complete a full two years of collegiate work. Numerous studies have supported

correlation between the length of time spent in a community college and later success in four-year institutions as transfer students.

If this proposal for "block transfer" is to win acceptance from the Arizona universities, reasonable uniformity in the general education requirement among the nine Arizona community colleges would seem a reasonable starting point. In the 1987-88 academic year catalogs, there were clearly significant differences in these requirements among the community colleges (Table V). Not only do the total hours required vary from 21 to 44, but minimum requirements for demonstrating mathematical competency vary from none in two colleges to basic college algebra in three of the remaining nine. Mathematics courses required vary among the other five.

The leadership of Arizona community colleges recognized the need for greater uniformity and moved during the past academic year to modify their respective institution's requirements as presented in Table VI. It is apparent that the degree of diversity has been significantly reduced with a range of 35 to 44 hours. Six of the nine will now require College Algebra as a minimum for the mathematics component of the general education requirement. The other three require intermediate algebra. Four of the nine require 41 or more hours.

General education requirements for the baccalaureate degree have undergone recent modification at both ASU and NAU. The University of Arizona does not have at present a university-wide general education requirement for the baccalaureate degree. The individual schools and colleges, with one exception, require forty or more credit hours of lower division courses. A general over-view of the requirements which are common to almost all of the programs in the three universities is as follows:

English	2 courses	(6 hours)
Mathematics	1 course	(3 hours)
Humanities	3 courses	(9 hours)
Social Science	3 courses	(9 hours)
Arts/Literature	2 courses	(6 hours)
Bio/Phys Sci.	2 courses	(8 hours)
Non-West..Civ.	1 course	(3 hours)
TOTAL	14 courses	(44 hours)

For almost all programs, the minimum requirement in mathematics is college algebra. Several programs require either demonstrated competence in a foreign language or one or two years of course work.

It would appear, therefore, that a lower division general education requirement of not less than 41 hours distributed as follows would satisfy the requirements at each of the three universities:

English	2 courses(Engl. Comp.)	(6 hrs)
Mathematics	1 course (College Alg.)	(3 hrs)
Humanities	3 courses	(9 hrs)
Social Sci.	3 courses	(9 hrs)
Arts/Lit.	2 courses	(6 hrs)
Bio/Phys Sci.	2 courses	(8 hrs)
TOTAL	13 courses	(41 hrs)

TABLE IV

MINIMUM GENERAL EDUCATION REQUIREMENTS OF ARIZONA PUBLIC UNIVERSITIES

	WRITING/ COMMUNICATIONS		MATHEMATICS	SOCIAL & BEHAVIORAL	HUMANITIES
ARIZONA STATE	Eng 101, 102 Literacy/ Critical Inquiry	(6) (6)	Math 115 (3) Stat or Comp (3)	2-3 courses (6-9)*	2-3 courses 2 (6-9) 2 courses in 1 Global and Historical

* Total of 15 hours combined. One course must be upper division.
** Students may combine this requirement w/other courses approved for G. S. credit.

NORTHERN ARIZONA	Eng 101, 102 102	(6) (3)*	Math 110 (3) Math (3)*	3 courses	6 courses (18)*1

* Include 12 hours upper division from Discipline Studies Block or Focus.

UNIVERSITY OF ARIZONA	Eng 101, 102 Writing course	(6) (3)*	Math 117 (3)**	3 courses (9)***	4 courses (15)

* Students must pass writing exam as prerequisite; failure requires additional courses.
** With few exceptions, College Algebra or equivalent is required.
*** One course must focus on gender, class, race or ethnicity.

TABLE V

MINIMUM GENERAL EDUCATION REQUIREMENTS OF ARIZONA COMMUNITY COLLEGES 1987-88 ACADEMIC YEAR

COLLEGES	WRITING/ COMMUNICATIONS	MATHEMATICS	SOCIAL & BEHAVIORAL	HUMANITIES
ARIZONA WESTERN	100, 101 or 3 hours of Eng. above 101 (6)	Math 110 or above (3) (Int Algebra)	2 courses (6)	2 courses (6)
CENTRAL ARIZONA	Eng 101, 102, (6)	Math 102 (3) (Finite Math)	4 courses (12)	3 courses (6)
COCHISE	101, 102 (6)	Math 120 (3) (college Algebra)	3 courses (9)	2 courses (6)
EASTERN ARIZONA	Eng 101, (6)	Math 154 (3) (college Algebra)	3 courses (9)	3 courses (9)
MARICOPA	101, 102 (6) Comm (3) Reading (0-3)	Math 105 (math for General Ed(3) or Int. Algebra)	3 courses (9)	2-3 courses(6)
MOHAVE	101, 102 (6)	1 course (3)	3 courses (9)	2 courses (6)
NAVAJO	Eng 111, 112, (6) (Int Algebra)	Math 100 (3) 3 courses (9) or above	2 courses (6) Navajo/Indian Studies	3 courses (9)
NORTHLAND PIONEER	Eng 101,	Math 130 (3) (college Algebra)	4 courses (12)	3 courses (9)
PIMA	101, 102 (6)	(combine w/science)	3 courses (9)	2 courses (6)
YAVAPAI	101, 102 (6)	(combine w/science)	2 courses (6)	1 courses (3)

Note: Total hours required may exceed total of minimum by area.

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TABLE VI

MINIMUM GENERAL EDUCATION REQUIREMENTS
OF
ARIZONA COMMUNITY COLLEGES

1988-89 ACADEMIC YEAR

COLLEGES	WRITING/ COMMUNICATIONS	MATHEMATICS	SOCIAL & BEHAVIORAL	HUMANITIES
ARIZONA WESTERN	6	Intermediate Algebra 3	9	9
CENTRAL ARIZONA	6		12	9
COCHISE	6	College Algebra 3	9	6
EASTERN ARIZONA	6	College Algebra 3	9	9
MARICOPA	9	Intermediate Algebra 3	9	6
MOHAVE	6	College Algebra 3	9	9
NORTHLAND PIONEER	6	College Algebra 3	9	9
PIMA	6	College Algebra 3	9	9
YAVAPAI	6	College Algebra 3	9	15

Upper division requirements at NAU (12 hours) and ASU (3 hours) would, of course, remain as at present. The current study at the University of Arizona may produce more uniform pattern of course requirements at that institution.

SPECIAL ADMISSION REQUIREMENTS

Another, rapidly increasing issue of articulation relates to the restrictions being placed on entry into many areas of university study that have historically been open to all students who meet the requirement for entry into the university. Selective admission into undergraduate programs in Nursing, Architecture, and Pharmacy have been traditional. Increasingly, barriers are being erected to restrict entry into programs in Education, Engineering, and Business Administration. Special requirements applicable to transfer students are being restructured, i.e., entry into the program in Business and Public Administration requires enrollment at the University of Arizona for not less than 12 credits with a GPA of 2.50. Students who transfer to the university and have met all the requirements except the 12 credits may be granted "provisional permission to enroll in upper division BPA courses until they have met the minimum." Similar regulations apply to students who wish to transfer into the upper division of the College of Engineering and Mines on a provisional basis except that a minimum of 15 units is required and the GPA must

meet the departmental requirement. One semester of pre-professional study at the University of Arizona is required for entry into the professional program of the College of Architecture if the student transfers from a community college. Somewhat similar requirements are in place at Arizona State University for entry into the upper division of the College of Business and the College of Engineering and Applied Sciences. Admission into the various undergraduate programs of the College of Architecture and Environmental Design is selective, but attendance at ASU is not required for upper division status.

A long-time source of irritation between universities with accredited programs in business administration and two year colleges is found in the restrictions imposed on the transfer of courses not regarded by the universities as acceptable for transfer despite significant commonality in content (with the exception of business law, which will meet the requirement but is accepted as a lower division course). This policy is mandated by the American Assembly of Collegiate Schools of Business as a requirement for accreditation and, to a substantial degree, falls outside the authority of the individual universities. Programs in business and accounting at two-year institutions contain significant content found in courses at the upper-division level in the universities. A problem arises if a student from the two-year college seeks to enter a university with an accredited program in business because a significant amount of coursework may be repetitive. For example, at Maricopa Community College, students completing the A.A.S. degree in Business Middle Management might take a total of seven or eight courses (21-24 units) that would need to be repeated at the upper-division level at the university, although these courses would qualify toward a maximum of 30 hours of lower division courses in economics and business. From a practical point of view, only a fraction of this 30-hour maximum would be included once the allowed transfer courses, including business law, are considered, probably nine hours or less. At the national level this issue is being debated before the committee appointed by the Department of Education to deal with accreditation issues.

ACHIEVEMENT STANDARDS

One aspect of community college-university relations for which no easy solution exists is that of differing standards of expectation and achievement. Given the relatively unselective admission standards of the community colleges and the tendency of better prepared students to select universities for entry as freshmen, there is usually a significant difference in the achievement of the two populations. Given the likelihood that teachers in each element will tend to "teach to the median" level of the student population, it is not unusual for teachers of upper division courses in Business and Engineering to assert that the transfer students are less well prepared in science and mathematics than the native students. The somewhat less rigorous environment of the two year college may also account for a decrease in grade point average that usually occurs in the first semester following transfer. Community college leaders point out, however, that their schools focus on areas such as reading and institute

corrective action, if necessary, while the universities neglect to measure this critical skill.

The efforts university and community college faculty have to achieve "course equivalency" in nomenclature need to continue, with a focus on course content and achievement level deemed satisfactory for acceptable performance. Sharing of course syllabi, mid-term, and final examinations will make it more obvious what the expectations are of the performance level at time of transfer and will assist the students in the community college and the professors in both institutional types to be better prepared for the task of improved articulation.

CONCLUSIONS

Arizona college students in increasing numbers find themselves using the facilities of the community colleges and the three public universities. Much has been done to create a situation in which transfer from one segment of the public post-secondary educational system to another is enhanced. Students have increasingly been provided better information on what the universities expect of them at the completion of their community college studies. Faculty have been encouraged in disciplinary areas to consult with each other. Significant problems remain, however, and in view of the large numbers of transfer students in both directions, the potential for increased efficiency exists.

RECOMMENDATIONS

- The Joint Conference Committee should continue to encourage the respective Boards to make the necessary investment of administrator and faculty time to continue to explore ways of achieving even better coordination at the level of the disciplines.

- The issue of recognizing the Associate in Arts and Science degree as evidence of equivalency in meeting the lower division general education requirements of the Arizona universities deserves the attention of the Board of Regents. The Board of Directors should encourage the community colleges to achieve a greater consensus in the over-all requirements for the general educational components of these degrees.